

EXHAUST VIBRATION DECOUPLING CONNECTOR WITH LOCKED LINER TUBES

ABSTRACT OF THE DISCLOSURE

An exhaust-vibration decoupling connector has an inlet tube (1) extended downstream from a decoupler inlet (2) to an inlet-tube step (22). The inlet-tube step includes a radially inward extension of the inlet tube to a damper seat (23) that includes further downstream extension of the inlet tube having a bend (36,37) which interlocks with a radially inward extension (24) of an outlet tube to prevent the connector from extension movement. An outlet tube (4) is extended upstream from a decoupler outlet (5) to an outlet-tube step (24) that includes a radially inward extension of the outlet tube to proximate an outside surface of the damper seat. A vibration damper is positioned removably in a damper fixture (3) that includes the damper seat intermediate the inlet-tube step and the outlet-tube step proximate midway between the decoupler inlet and the decoupler outlet. Surrounding the vibration damper, a decoupler bellows (7) has an upstream bellows attachment (9) proximate an outside periphery of the inlet tube and a downstream bellows attachment (10) proximate an outside periphery of the outlet tube. Enclosing an outside periphery of the decoupler bellows is a flex cover (13) that is extended from proximate the decoupler inlet to the decoupler outlet. External to the flex cover and external to the decoupler bellows can be a shield sleeve (16) that is extended from proximate the decoupler outlet to predeterminedly proximate the decoupler inlet for rigid protection of the decoupler bellows and the flex cover. The decoupler inlet is articulated for attachment to an exhaust-outlet structure (33) on an engine. The decoupler outlet is articulated for attachment to an exhaust-treatment structure (34).